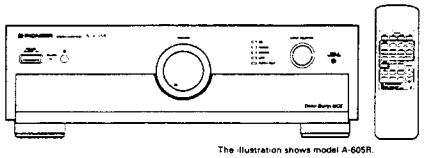
PIONEER®
The Art of Entertainment

Service Manual


The illustration shows model A-605R.

ORDER NO.
RRV1594

STEREO AMPLIFIER

A-605R
A-605R-G
A-505R
A-405R
A-405R-G

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model					Power Requirement	The voltage can be converted by the following method.
	A-605R	A-605R-G	A-505R	A-405R	A-405R-G		
HY/EW	O	O	O	O	O	AC220 – 230V	———
HY/GR	O	–	O	O	–	AC220 – 230V	———
SD	O	–	–	–	–	AC110V/120 – 127V/220V/240V	With the voltage selector
HV	O	–	–	O	–	AC230V	———

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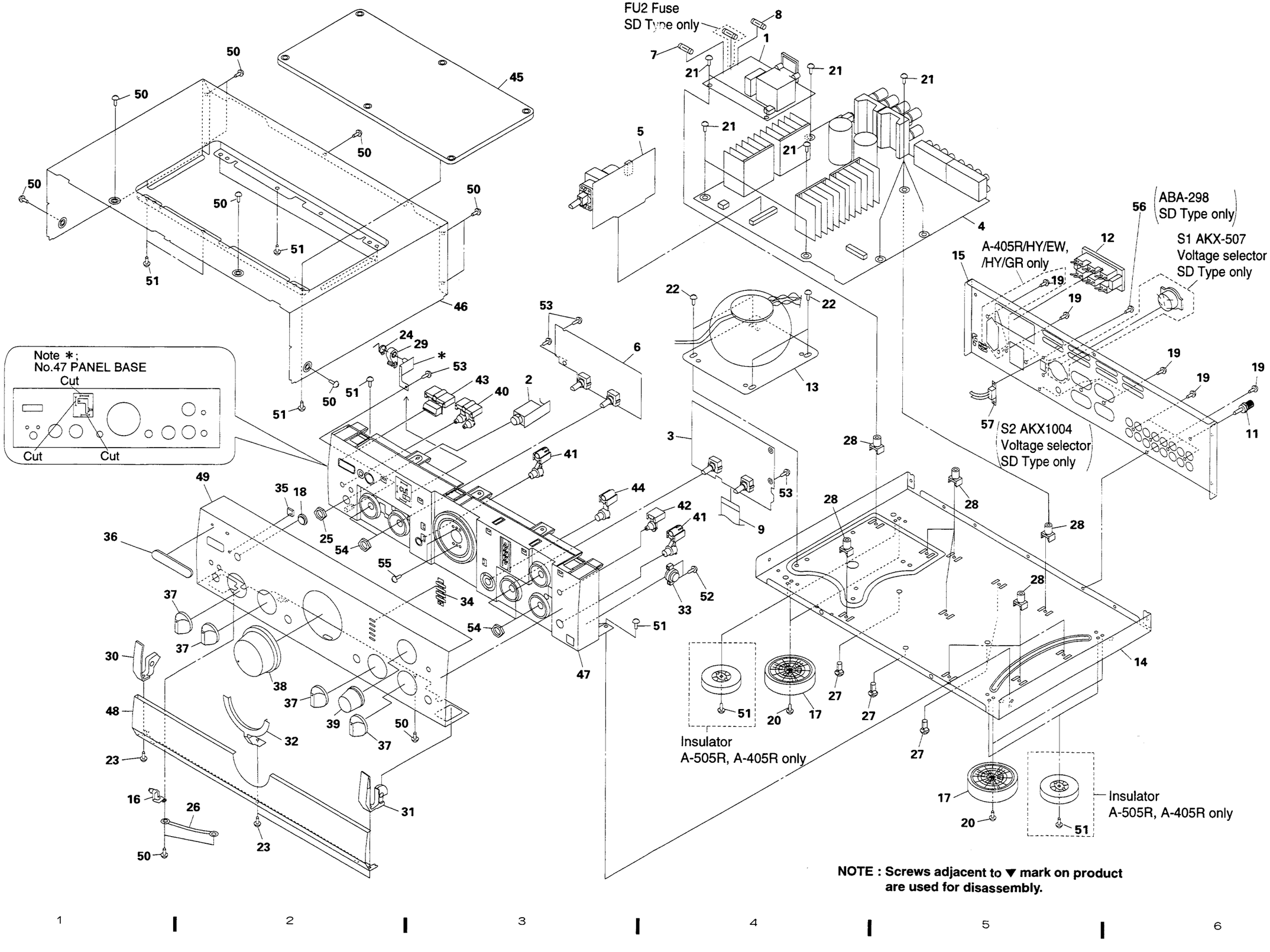
1. EXPLODED VIEWS AND PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List (for A-605R/HY/EW)

Mark	No.	Description	Parts No.
	1	AC PRIMARY ASSY	AWZ7944
NSP	2	HEADPHONE ASSY	AWZ7947
	3	FRONT R ASSY	AWZ8398
	4	AF ASSY	AWZ7932
	5	VOLUME ASSY	AWZ7941
	6	FRONT L ASSY	AWZ8397
⚠	7	FU3 FUSE (T500mA)	AEK1051
⚠	8	FU1 FUSE (T2A)	AEK1057
	9	J1 FLEXIBLE CABLE	ADD1114
	10	.....	
	11	TERMINAL SCREW	AKE – 031
⚠	12	AC SOKET 3 – P	AKP – 502
⚠	13	T1 POWER TRANSFORMER	ATS7128
NSP	14	CHASSIS	ANA7048
	15	REAR PANEL	ANC7424
	16	POCKET HOLDER ASSY	ANG1864
	17	FOOT	AMR1159
	18	REMOCON WINDOW	AAK2457
	19	SCREW	ABA – 298
	20	SCREW (STEEL)	ABA1004
	21	SCREW	ABA1018
	22	SCREW (STEEL)	ABA1053
	23	SCREW	ABA7023
	24	POCKET SPRING	ABH7114
	25	NUT	ABN – 065
NSP	26	CORD WITH PLUG	ADH1003
NSP	27	PCB HOLDER	AEC7057
NSP	28	PCB MOULD	AMR1525
	29	POCKET LOCK	AMR2587
	30	HINGE L	AMR7115
	31	HINGE R	AMR7116
	32	PANEL STOPPER MOULD	AMR7117
	33	DUMPER	AXA7036
	34	LED LENS	AAK7260
	35	LED LENS	PNW2019
	36	NAME PLATE	VAM1032
	37	ROTARY KNOB C	AAB7089
	38	ROTARY KNOB L	AAB7090
	39	ROTARY KNOB B	AAB7091
	40	SPEAKER BUTTON	AAD7290
	41	SELFILLMI BUTTON A	AAD7291
	42	SELFILLMI BUTTON B	AAD7292
	43	POWER BUTTON	AAD7293
	44	MUTING BUTTON	AAD7294
	45	TOP COVER	AME1086
	46	METAL BONNET	ANE7119
	47	PANEL BASE	AMB7362
	48	DOOR PANEL	ANB7050
	49	FRONT PANEL	ANB7052
	50	SCREW	BBT30P080FZK
	51	SCREW	BBZ30P080FMC
	52	SCREW	BPZ20P080FMC
	53	SCREW	BPZ26P080FMC
	54	NUT	NK90FUC
	55	SCREW	VMZ30P060FMC
	56	SCREW	BMZ30P080FZK
⚠	57	SWITCH (MAIN POWER)	ASH – 501

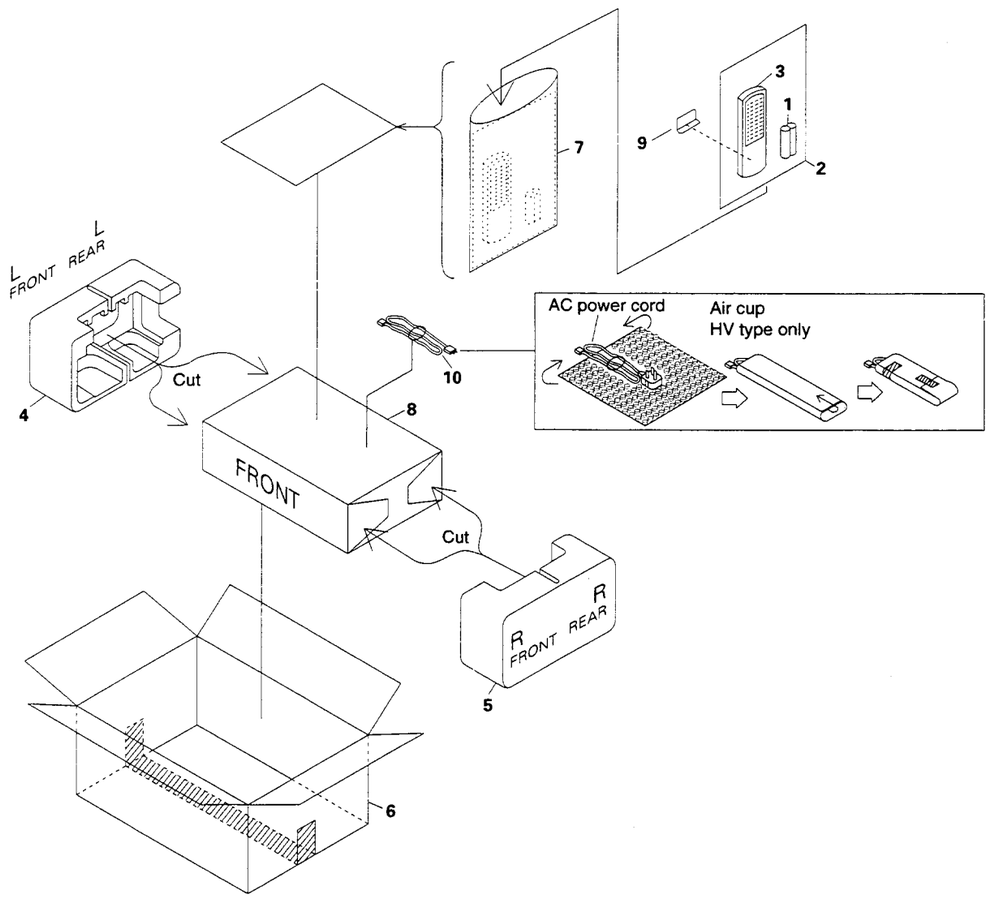


NOTE : Screws adjacent to ▼ mark on product are used for disassembly.

2. PACKING AND PARTS LIST

Parts List (for A-605R/HY/EW)

Mark	No.	Description	Parts No.
NSP	1	BATTERY (R6P, AA)	AEX – 010
	2	OPERATING INSTRUCTIONS (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE7077
	3	REMOTE CONTROL UNIT (CU – A013)	AXD7053
	4	SIDE PROTECTOR L	AHA7127
	5	SIDE PROTECTOR R	AHA7128
	6	PACKING CASE	AHD7308
NSP	7	LITERATURE BAG	AHG – 117
	8	PACKING SHEET	AHG1016
	9	BATTERY COVER	AZN2249
⚠	10	AC POWER CORD	ADG1154



3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:
Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. CAPACITORS:
Unit: p:pF or μF unless otherwise noted.
Ratings: capacitor (μF)/voltage(V) unless othrewise noted.
Rated voltage: 50V except for electrolytic capacitors.

5. COILS:
Unit: m:mH or μH unless otherwise noted.

6. VOLTAGE AND CURRENT:
V : Signal voltage at rated output.
or ← V:
DC voltage (V) at no input signal unless otherwise noted.
Value in ( ) is DC voltage at rated power.
⇦ mA or ← mA:
DC current at no input signal unless otherwise noted.

7. OTHERS:
- ⊘ or ⊘ : Adjusting point.
- ◄ : Measurement point.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. SCH-□ ON THE SCHEMATIC DIAGRAM:
- SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

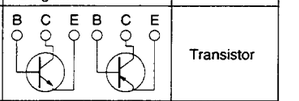
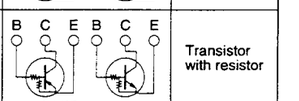
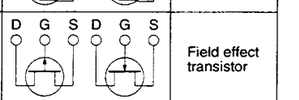
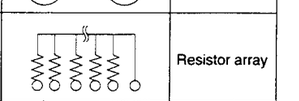
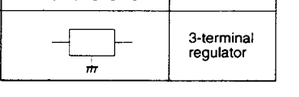
9. SWITCHES (Underline indicates switch position):

FRONT L ASSY
S701 : POWER STANDBY/ON
S702 : LOUDNESS
S703 : SPEAKER A
S704 : SPEAKER B

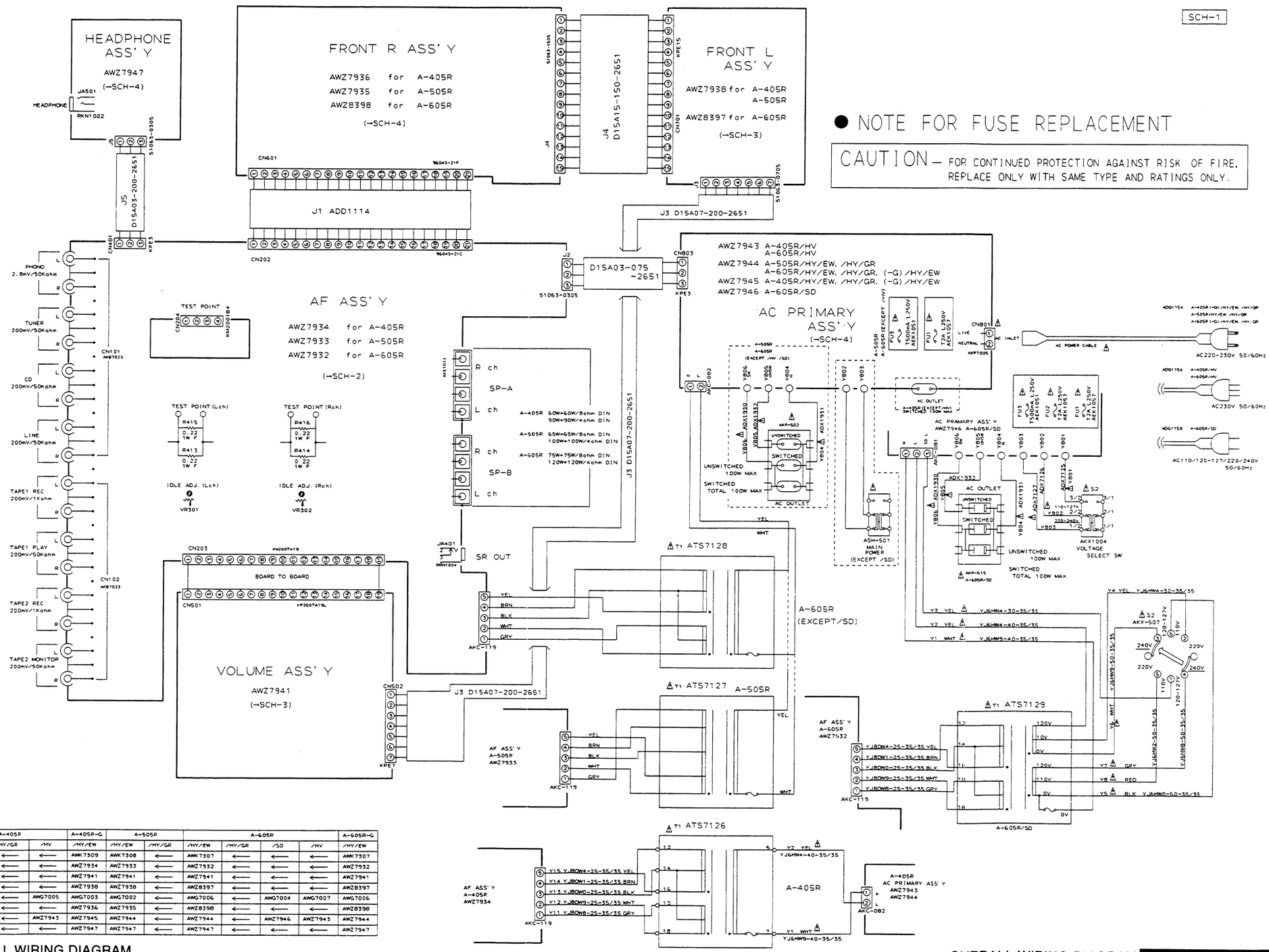
FRONT R ASSY
S601 : INPUT SELECTOR
S602 : REC SELECTOR(SOURCE/OFF/CD/TUNER)
S603 : TAPE2 MONITOR
S604 : DIRECT
S605 : MUTING

NOTE FOR PCB DIAGRAMS

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3.1 OVERALL WIRING DIAGRAM

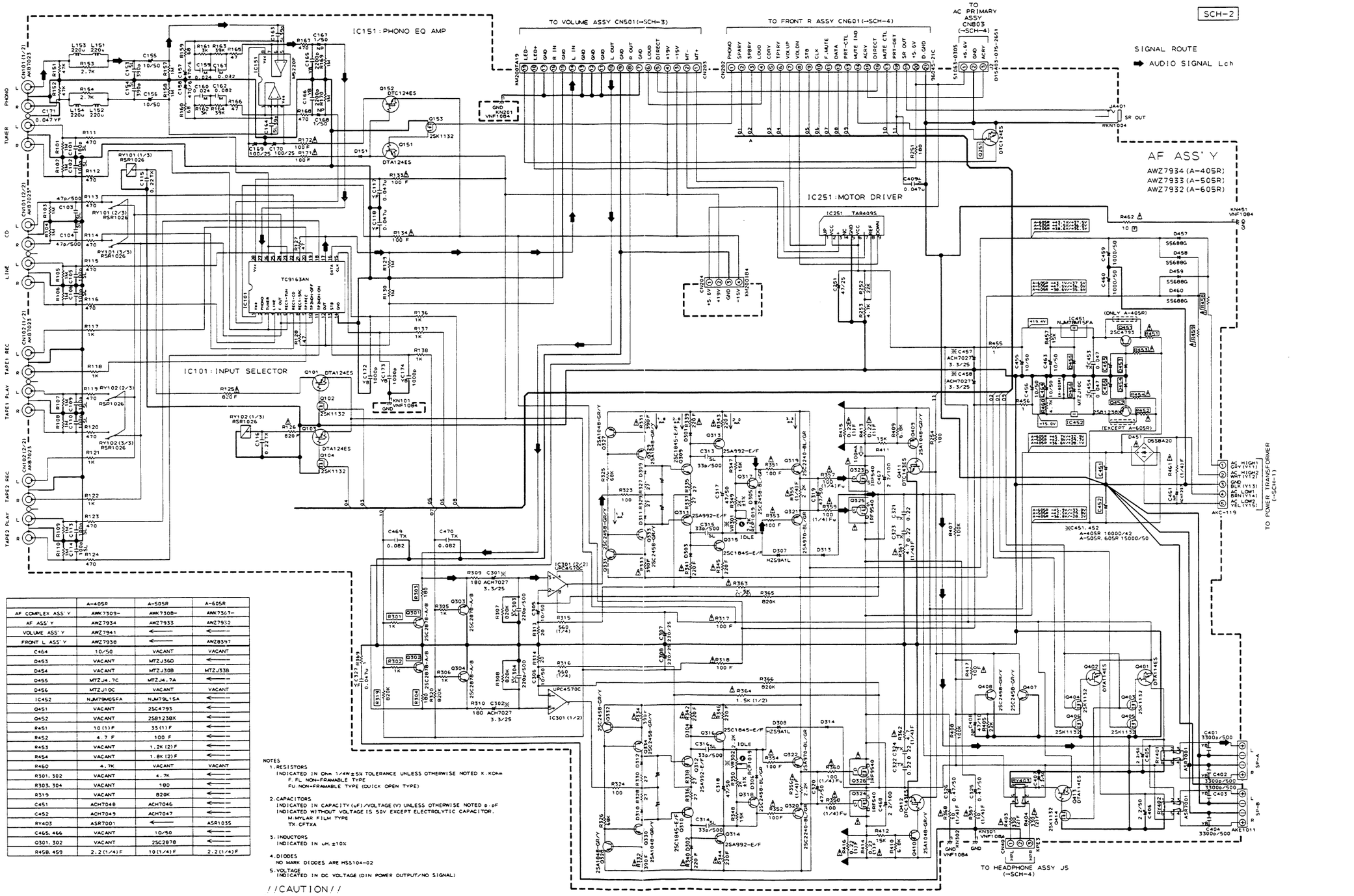


	A-405R			A-405R-G	A-505R		A-605R				A-605R-G
	/HY/EW	/HY/GR	/HV	/HY/EW	/HY/EW	/HY/GR	/HY/EW	/HY/GR	/SD	/HV	/HY/EW
AF COMPLEX ASS' Y	AWK7309	←	←	AWK7309	AWK7308	←	AWK7307	←	←	←	AWK7307
AF ASS' Y	AWZ7934	←	←	AWZ7934	AWZ7933	←	AWZ7932	←	←	←	AWZ7932
VOLUME ASS' Y	AWZ7941	←	←	AWZ7941	AWZ7941	←	AWZ7941	←	←	←	AWZ7941
FRONT L ASS' Y	AWZ7938	←	←	AWZ7938	AWZ7938	←	AWZ8397	←	←	←	AWZ8397
CONTROL ASS' Y	AWG7003	←	AWG7005	AWG7003	AWG7002	←	AWG7006	←	AWG7004	AWG7007	AWG7006
FRONT R ASS' Y	AWZ7936	←	←	AWZ7936	AWZ7935	←	AWZ8398	←	←	←	AWZ8398
AC PRIMARY ASS' Y	AWZ7945	←	AWZ7943	AWZ7945	AWZ7944	←	AWZ7944	←	AWZ7946	AWZ7943	AWZ7944
HEAD PHONE ASS' Y	AWZ7947	←	←	AWZ7947	AWZ7947	←	AWZ7947	←	←	←	AWZ7947

SCH-1 OVERALL WIRING DIAGRAM

OVERALL WIRING DIAGRAM SCH-1

3.2 AF ASSEMBLY



	A-405R	A-505R	A-605R
AF COMPLEX ASS'Y	AWK7309-	AWK7308-	AWK7307-
AF ASS'Y	AWZ7934	AWZ7933	AWZ7932
VOLUME ASS'Y	AWZ7941	←	←
FRONT L ASS'Y	AWZ7938	←	AWZ8547
C464	10/50	VACANT	VACANT
D453	VACANT	MTZJ36D	←
D454	VACANT	MTZJ30B	MTZJ33B
D455	MTZJ4.7C	MTZJ4.7A	←
D456	MTZJ10C	VACANT	VACANT
IC452	NJM79M05FA	NJM79L15A	←
Q451	VACANT	2SC4793	←
Q452	VACANT	2SB1238X	←
R451	10 (1) F	35 (1) F	←
R452	4.7 F	100 F	←
R453	VACANT	1.2K (2) F	←
R454	VACANT	1.8K (2) F	←
R460	4.7K	VACANT	VACANT
R301, 302	VACANT	4.7K	←
R303, 304	VACANT	180	←
R319	VACANT	820K	←
C451	ACH7048	ACH7046	←
C452	ACH7049	ACH7047	←
RY403	ASR7001	←	ASR1035
C465, 466	VACANT	10/50	←
Q301, 302	VACANT	2SC2878	←
R458, 459	2.2 (1/4) F	10 (1/4) F	2.2 (1/4) F

NOTES
1. RESISTORS
INDICATED IN Ohm 1/4W±5% TOLERANCE UNLESS OTHERWISE NOTED K:KOhm
F:FL NON-FRAMABLE TYPE
FU:NON-FRAMABLE TYPE (QUICK OPEN TYPE)

2. CAPACITORS
INDICATED IN CAPACITY (uF) /VOLTAGE (V) UNLESS NOTED p:pF
INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
M:MYLAR FILM TYPE
TX:CFTXA

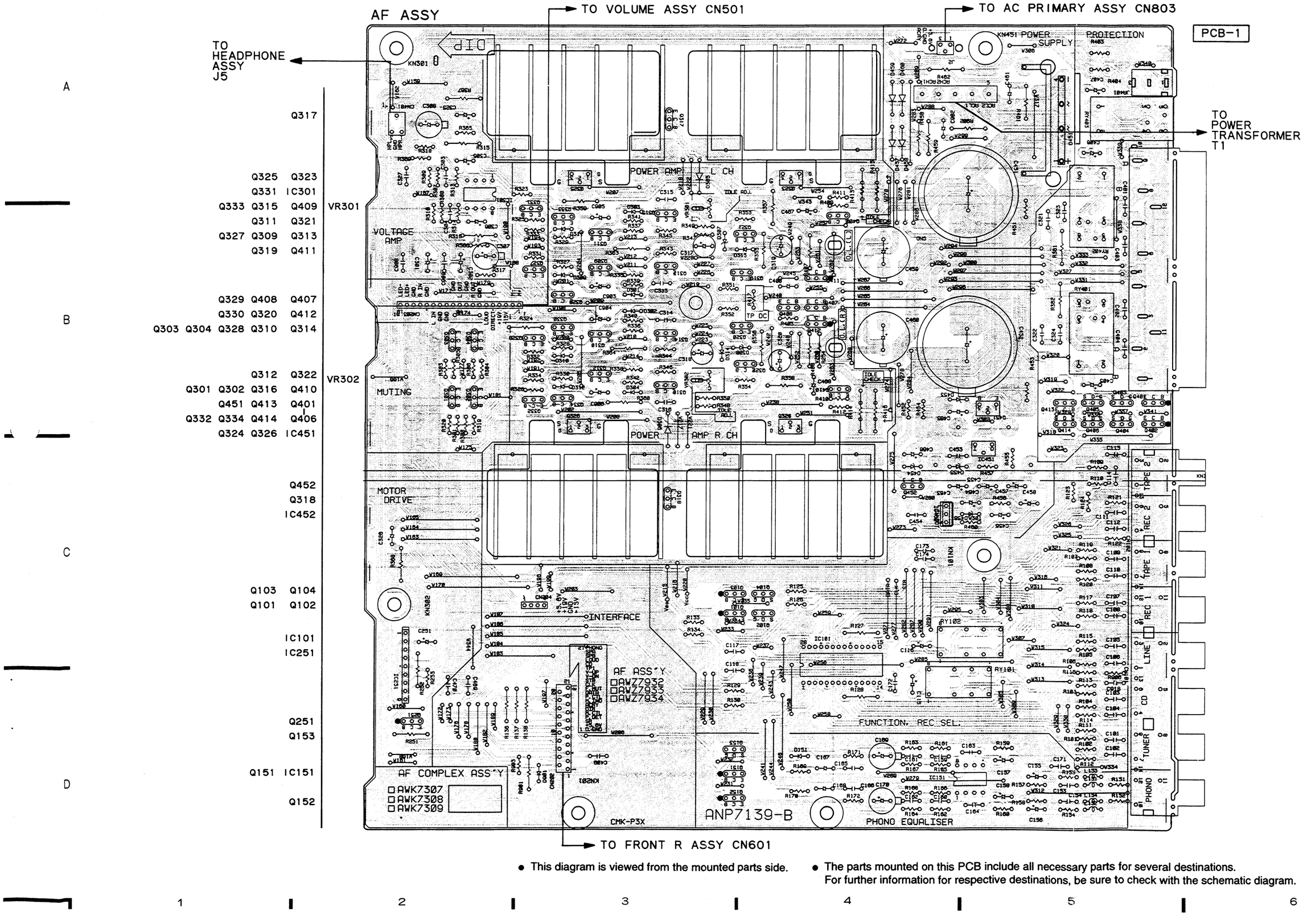
3. INDUCTORS
INDICATED IN uH, ±10%

4. DIODES
NO MARK DIODES ARE HS5104-02

5. VOLTAGE
INDICATED IN DC VOLTAGE (DIN POWER OUTPUT/NO SIGNAL)

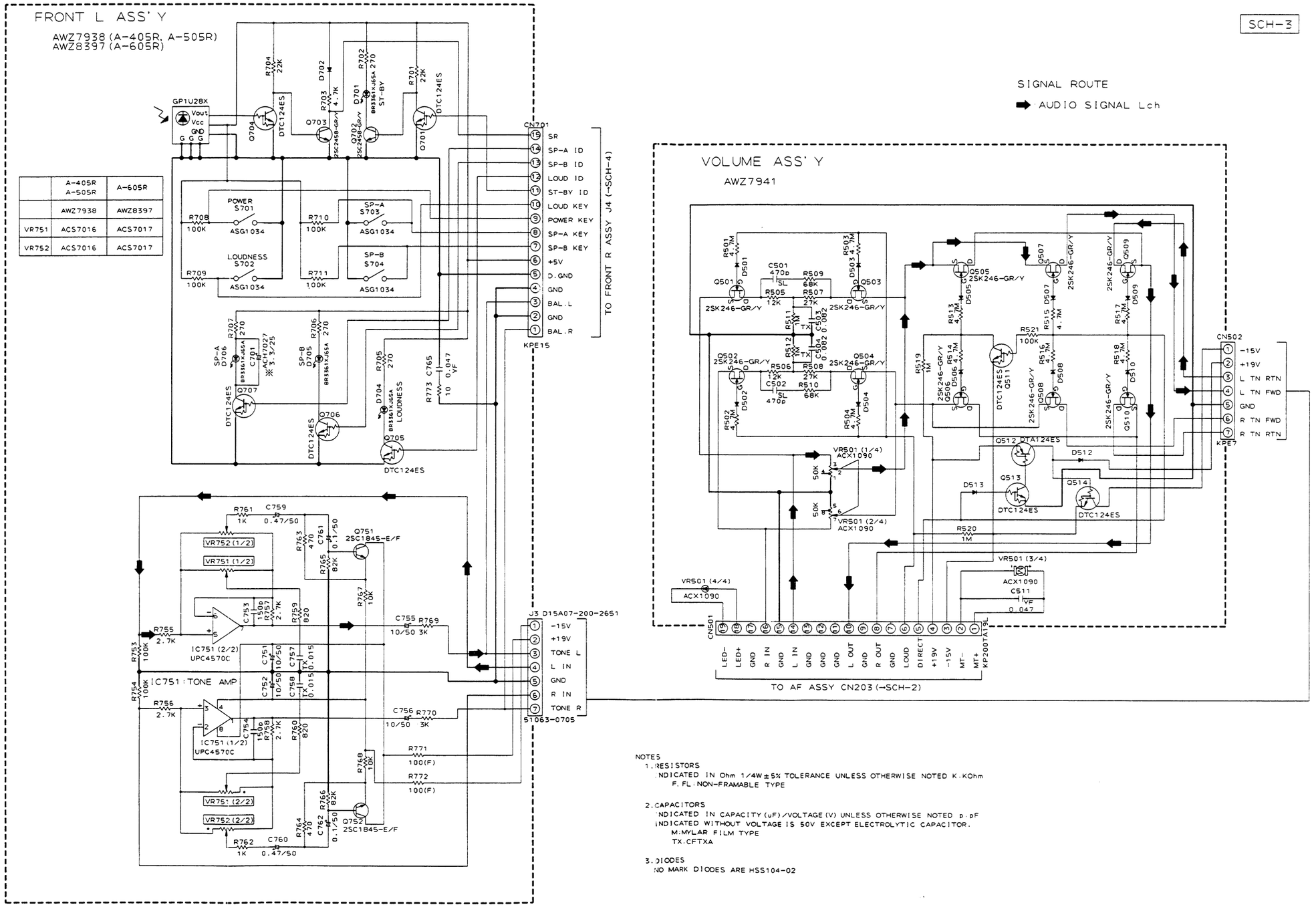
//CAUTION//

HEATSINKS' (Q323-326) DC LEVEL IS EQUAL TO +8 OR -8.
DON'T TOUCH OR YOU WILL BE ELECTRICALY SHOCKED.



- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

3.3 FRONT L AND VOLUME ASSEMBLIES



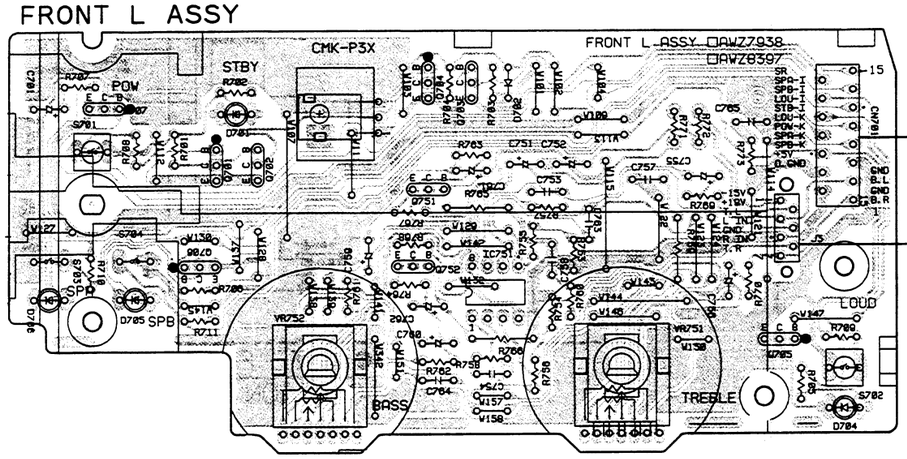
NOTES
1. RESISTORS
   INDICATED IN Ohm 1/4W ± 5% TOLERANCE UNLESS OTHERWISE NOTED K : KOhm
   F, FL : NON-FRAMABLE TYPE

2. CAPACITORS
   INDICATED IN CAPACITY (uF) / VOLTAGE (V) UNLESS OTHERWISE NOTED p : pF
   INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
   M : MYLAR FILM TYPE
   TX : CFTXA

3. DIODES
   NO MARK DIODES ARE HSS104-02

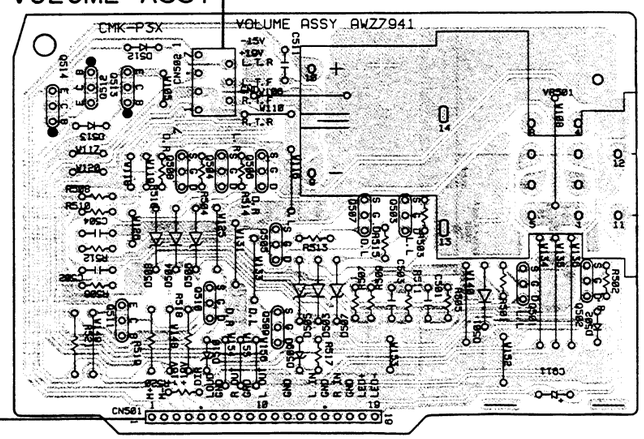
PCB-2

FRONT L ASSY



Q707 Q701 Q702 Q706 Q704 Q703 Q751 IC751 Q752 Q705

VOLUME ASSY



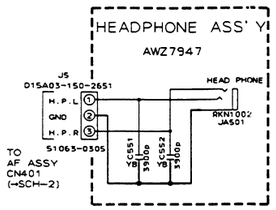
Q511–Q514 Q508 Q510 Q504 Q506 Q505 Q509 Q507 Q503 Q501 Q502

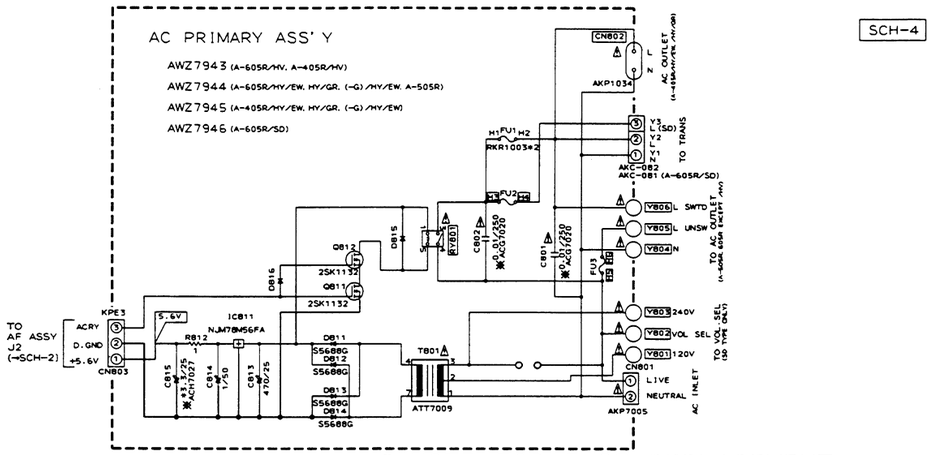
- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

ANP7139-B

3.4 FRONT R, HEADPHONE, AC PRIMARY ASSEMBLIES

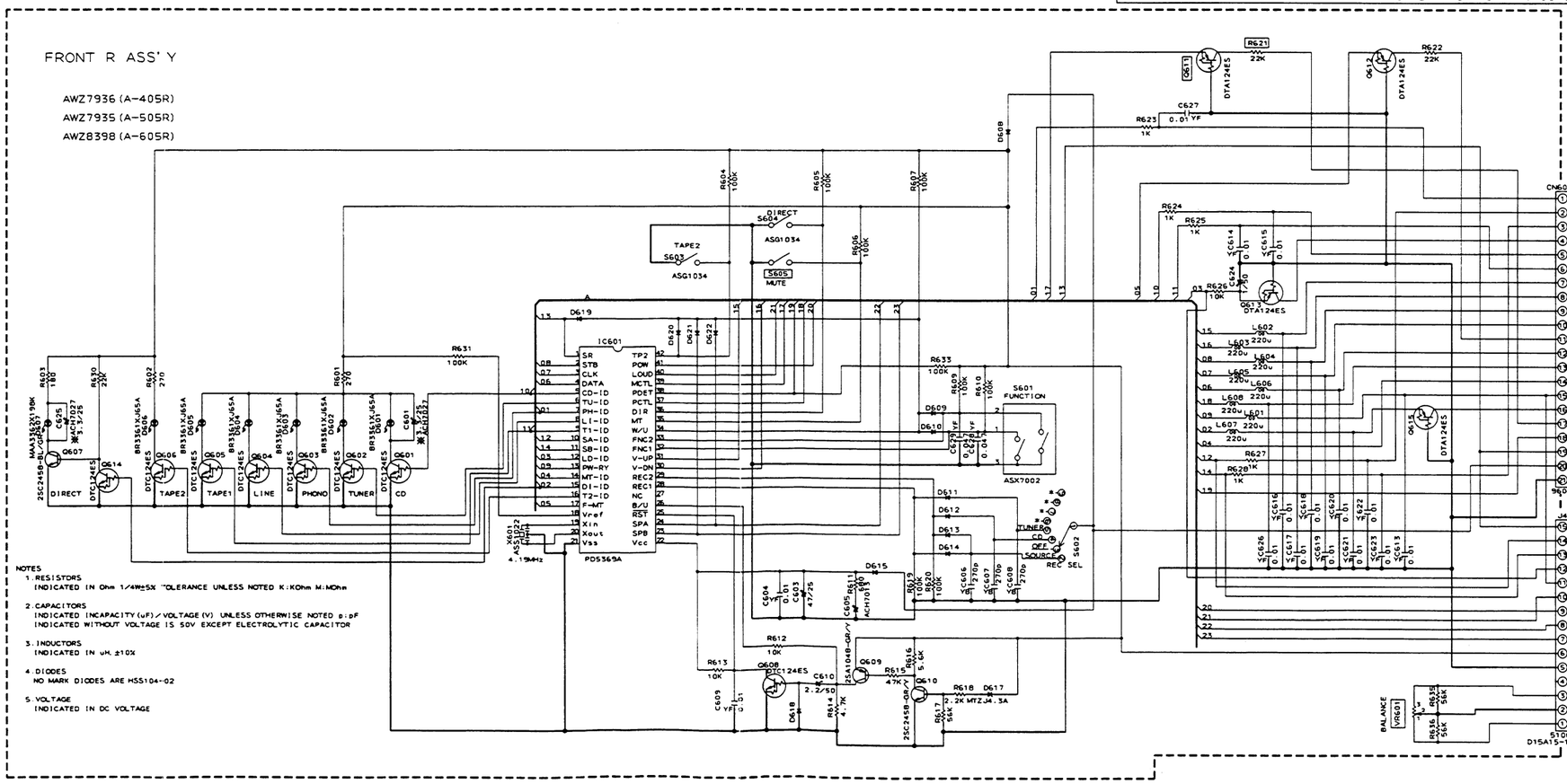
	A-405R		A-505R	A-605R		
	/HY/EW, /HY/GR	/HV	/HY/EW, /HY/GR	/HY/EW, /HY/GR	/HV	/SD
CONTROL ASS'Y	AWG7003-	AWG7005-	AWG7002-	AWG7006-	AWG7007-	AWG7004-
FORNT R ASS'Y	AWZ7936	←	AWZ7935	AWZ8398	←	←
AC PRIMARY ASS'Y	AWZ7945	AWZ7943	AWZ7944	←	AWZ7943	AWZ7946
HEADPHONE ASS'Y	AWZ7947	←	←	←	←	←
S605	VACANT	VACANT	ASQ1034	←	←	←
CN802	AKP1034	VACANT	VACANT	VACANT	VACANT	VACANT
RY801	ASR1044	←	←	←	←	ASR1036
YB01	VACANT	VACANT	VACANT	VACANT	VACANT	ADX7125
YB02	VACANT	VACANT	VACANT	VACANT	VACANT	ADX7126
YB03	VACANT	VACANT	VACANT	VACANT	VACANT	ADX7127
YB04	VACANT	VACANT	ADX1930	←	VACANT	ADX1930
YB05	VACANT	VACANT	ADX1932	←	VACANT	ADX1932
YB06	VACANT	VACANT	ADX1931	←	VACANT	ADX1951
H3, H4	VACANT	VACANT	VACANT	VACANT	VACANT	RKR1003
H5, H6	VACANT	VACANT	RKR1003	←	VACANT	RKR1003
R621	VACANT	VACANT	22K	←	←	←
Q611	VACANT	VACANT	DTA124ES	←	←	←
S602	ASD7001	←	←	ASD7009	←	←
VR601	ACS7014	←	←	ACS7015	←	←





● NOTE FOR FUSE REPLACEMENT

CAUTION— FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

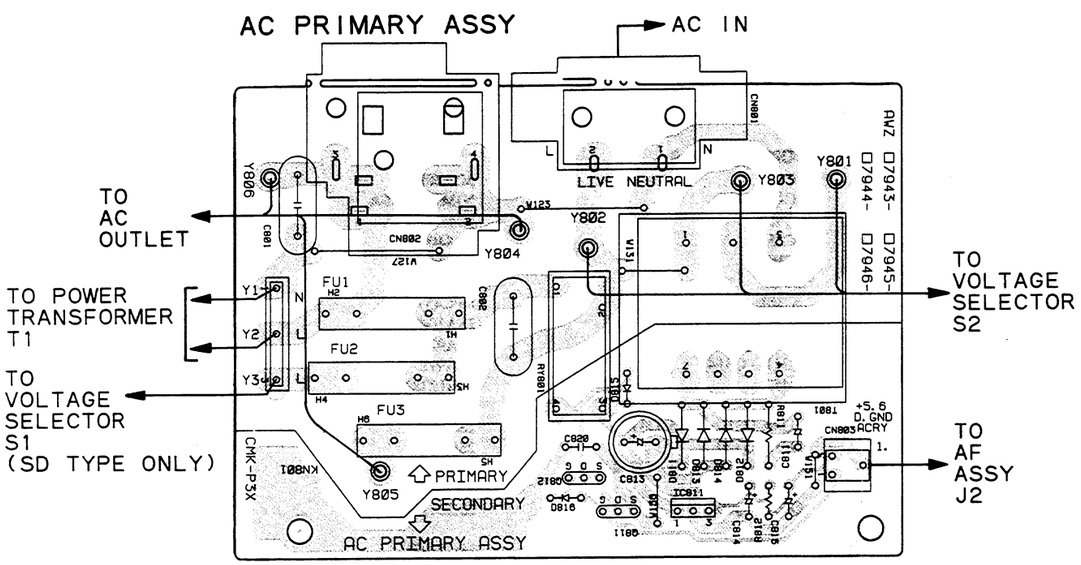


SCH-4 FRONT R ASSY, HEADPHONE ASSY, AC PRIMARY ASSY

FRONT R ASSY, HEADPHONE ASSY, AC PRIMARY ASSY **SCH-4**

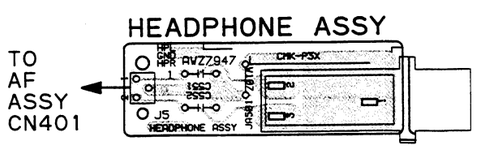
PCB-3

AC PRIMARY ASSY

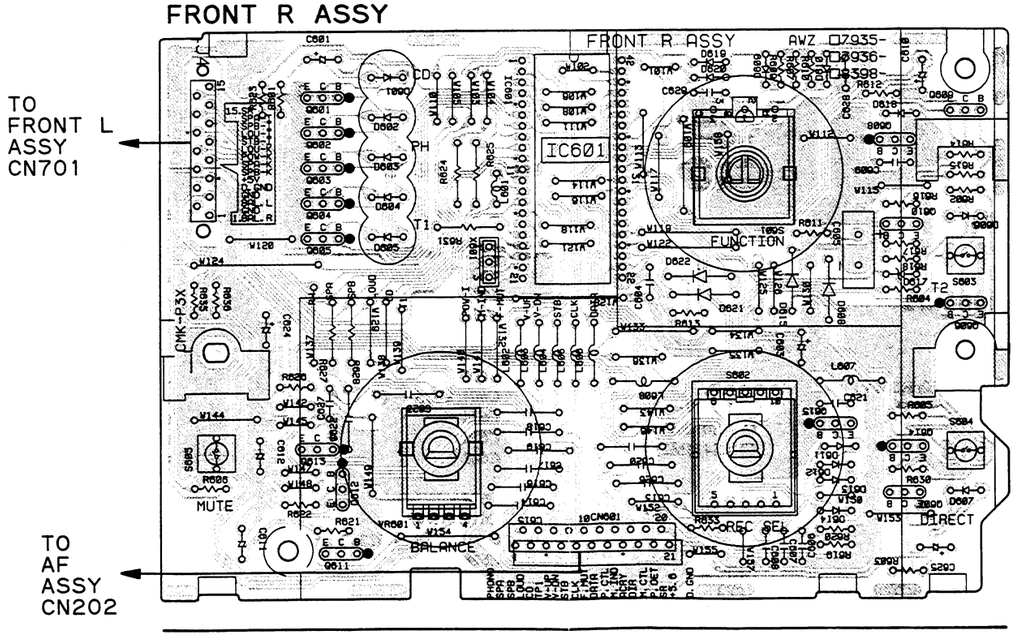


Q812 Q811 IC811

HEADPHONE ASSY



FRONT R ASSY



Q601–Q605 Q613 Q612 Q611 | IC601 | Q615 Q608 Q609 Q610 Q606 Q614 Q607

- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

ANP7140-B

4. PCB PARTS LIST

(for A-605R/HY/EW)

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	→	*56 × 10¹*	→ *561*	*RD1/4PU561J*
47kΩ	→	*47 × 10³*	→ *473*	*RD1/4PU473J*
0.5Ω	→	*0R5*	.....	*RN2H0R5K*
1Ω	→	*1R0*	.....	*RS1P1R0K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	→	*562 × 10¹*	→ *5621*	*RN1/4PC5621F*

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
NSP		CONTROL ASSY	AWG7006
		├ AC PRIMARY ASSY	AWZ7944
NSP		├ HEADPHONE ASSY	AWZ7947
		└ FRONT R ASSY	AWZ8398
NSP		AF COMPLEX ASSY	AWK7307
		├ AF ASSY	AWZ7932
		├ VOLUME ASSY	AWZ7941
		└ FRONT L ASSY	AWZ8397
AC PRIMARY ASSY			
SEMICONDUCTORS			
	IC811		NJM78M56FA
	Q811, Q812		2SK1132
	D815, D816		HSS104 – 02
	D811 – D814		S5688G
TRANSFORMERS			
⚠	T801		ATT7009
SWITCHES AND RELAYS			
⚠	RY801		ASR1044
CAPACITORS			
⚠	C801, C802	(10000pF/250V)	ACG7020
	C815	(3.3μF/25V)	ACH7027
	C814		CEAS010M50
	C813		CEAS471M25
RESISTORS			
		All Resistors	RD1/4PU□□□J
OTHERS			
⚠	CN801	AC INLET	AKP7005
	CN803	CONNECTOR(3P)	KPE3
	H1, H2, H5, H6	FUSE HOLDER	RKR1003
HEADPHONE ASSY			
CAPACITORS			
	C551, C552		CKCYB392K50

Mark	No.	Description	Parts No.
OTHERS			
		CABLE HOLDER(3P)	51063 – 0305
	JA501		RKN1002
FRONT R ASSY			
SEMICONDUCTORS			
	IC601		PD5369A
	Q609		2SA1048
	Q607, Q610		2SC2458
	Q611 – Q613, Q615		DTA124ES
	Q601 – Q606, Q608, Q614		DTC124ES
	D601 – D606		BR3361XJ65A
	D608 – D615, D618 – D622		HSS104 – 02
	D607		MAA3362X198K
	D617		MTZJ4.3A
COILS AND FILTERS			
	X601	(4.19MHz)	ASS1022
	L601 – L608		LAU221J
SWITCHES AND RELAYS			
	S602		ASD7009
	S603 – S605		ASG1034
	S601		ASX7002
CAPACITORS			
	C605		ACH7013
	C601, C625	(3.3μF/25V)	ACH7027
	C624		CEAS010M50
	C610		CEAS2R2M50
	C603		CEAS470M25
	C604		CKCYF103Z50
	C606 – C608		CKPUYB271K50
	C609, C613 – C623, C626		CKPUYF103Z25
	C628, C629		CKPUYF473Z16
RESISTORS			
	VR601	(500kΩ – B)	ACS7015
		Other Resistors	RD1/4PU□□□J

Mark	No.	Description	Parts No.
OTHERS			
		CABLE HOLDER(15P)	51063 – 1505
	CN601	CONNECTOR	9604S – 21F
AF ASSY			
SEMICONDUCTORS			
	IC151		M5220P
	IC451		NJM78M15FA
	IC452		NJM79L15A
	IC251		TA8409S
	IC101		TC9163AN
	IC301		UPC4570C
	Q327 – Q330, Q409, Q410		2SA1048
	Q321, Q322		2SA970
	Q311 – Q314		2SA992
	Q452		2SB1238X
	Q309, Q310, Q315, Q316		2SC1845
	Q319, Q320		2SC2240
	Q317, Q318, Q331 – Q334		2SC2458
	Q407, Q408		2SC2458
	Q301 – Q304		2SC2878
	Q451		2SC4793
	Q102, Q104, Q153, Q403 – Q406		2SK1132
	Q414		2SK1132
	Q401, Q402, Q413		DTA114ES
	Q101, Q103, Q151		DTA124ES
	Q152, Q251		DTC124ES
	Q411, Q412		DTC143ES
⚠	Q323, Q324		IRF540
⚠	Q325, Q326		IRF9540
⚠	D451		D5SBA20
	D151, D301 – D306, D309 – D314		HSS104 – 02
	D307, D308		HZS9A1L
	D454		MTZJ33B
	D453		MTZJ36D
	D455		MTZJ4.7A
	D457 – D460		S5688G
COILS AND FILTERS			
	L151 – L154		LAU221J
SWITCHES AND RELAYS			
	RY403		ASR1035
	RY401, RY402		ASR7001
	RY101, RY102 (12V/960Ω)		RSR1026
CAPACITORS			
	C461	(1μF/100V)	ACH1237
	C301, C302, C457, C458	(3.3μF/25V)	ACH7027
	C451	(15000pF/42V)	ACH7046
	C452	(15000pF/42V)	ACH7047
	C101, C102, C105, C106		CCCSL101J50
	C109, C110, C113, C114		CCCSL101J50
	C303, C304		CCCSL221K500
	C313 – C316		CCCSL330K500
	C163, C164		CCCSL390J50
	C153, C154		CCCSL391J50

Mark	No.	Description	Parts No.
	C103, C104		CCCSL470K500
	C167, C168		CEANP010M50
	C408		CEANP470M10
	C155, C156, C305, C306		CEAS100M50
	C455, C456, C463, C465, C466		CEAS100M50
	C169, C170		CEAS101M25
	C459, C460		CEAS102M50
	C307, C308		CEAS221M25
	C405 – C407		CEAS2R2M50
	C467, C468		CEAS2R2M100
	C251		CEAS470M25
	C317 – C320		CEAS470M50
	C157, C158		CEAS471M6
	C325, C326		CEASR47M50
	C115, C116, C321 – C324		CFTXA224J50
	C469, C470		CFTXA823J50
	C165, C166		CKCYB222K50
	C401 – C404		CKCYB332K500
	C117, C118, C171, C327, C409		CKCYF473Z50
	C453, C454		CKCYF473Z50
	C172 – C174		CKPUYB102K50
	C159, C160		CQMA243J50
	C161, C162		CQMA823J50
RESISTORS			
⚠	R363, R364		RD1/2PM152J
⚠	R133, R134, R171, R172		RD1/4MUF101J
⚠	R317, R318, R351 – R354, R417		RD1/4MUF101J
⚠	R452		RD1/4MUF101J
⚠	R339 – R346		RD1/4MUF221J
⚠	R331 – R334		RD1/4MUF391J
⚠	R125, R126		RD1/4MUF821J
	R315, R316		RD1/4PM561J
⚠	R367, R368		RD1/4PMF100J
⚠	R355, R356		RD1/4PMF222J
⚠	R458, R459		RD1/4PMF2R2J
⚠	R461		RD1/4PMF470J
⚠	R361, R362		RD1/4PMF4R7J
⚠	R462		RD1/4PU100J
⚠	R357 – R360		RFA1/4PS101J
	R349, R350		RN1/6PQ2001F
⚠	R451		RS1MMF330J
⚠	R413 – R416		RS1MMFR22J
⚠	R453		RS2MMF122J
⚠	R454		RS2MMF182J
⚠	R403, R404		RS2MMF331J
	VR301, VR302	(2.2kΩ, 0.1W)	RCP1019
		Other Resistors	RD1/4PU□□□J
OTHERS			
		CABLE HOLDER(3P)	51063 – 0305
	CN202	CONNECTOR	9604S – 21C
		SCREW	ABA – 298
		SCREW (STEEL)	ABA1007
		SCREW	ABA1052
	CN101, CN102	PIN JACK(8P)	AKB7023
		SPEAKER TERMINAL 8 – P	AKE1011
		HEAT SINK FITTING	ANG7095
		HEAT SINK B	ANH1021
		HEAT SINK	ANH1150

Mark	No.	Description	Parts No.
		HEAT SINK L	ANH7044
	J2	JUMPER WIRE	D15A03-075-2651
	CN204	4P PLUG	KM200IB4
	CN203	19P PLUG	KM200TA19
	CN401	CONNECTOR(3P)	KPE3
	JA401	JACK	RKN1004
		PCB BINDER	VEF1040
	KN101, KN201	EARTH METAL FITTING	VNF1084
	KN301, KN302, KN451	EARTH METAL FITTING	VNF1084

VOLUME ASSY

SEMICONDUCTORS

Q501 – Q510		2SK246
Q512		DTA124ES
Q511, Q513, Q514		DTC124ES
D501 – D504, D512, D513		HSS104 – 02
D505 – D510		HSS104 – 02

CAPACITORS

C501, C502		CCCSL471J50
C503, C504		CFTXA823J50
C511		CKCYF473Z50

RESISTORS

VR501	VARIABLE RESISTOR	ACX1090
	Other Resistors	RD1/4PU□□□J

OTHERS

CN501	19P SOCKET	KP200TA19L
CN502	CONNECTOR(7P)	KPE7

FRONT L ASSY

SEMICONDUCTORS

IC751		UPC4570C
Q751, Q752		2SC1845
Q702, Q703		2SC2458
Q701, Q704 – Q707		DTC124ES
D701, D704 – D706		BR3361XJ65A
D702		HSS104 – 02

SWITCHES AND RELAYS

S701 – S704		ASG1034

CAPACITORS

C701	(3.3μF/25V)	ACH7027
C753, C754		CCCSL151J50
C751, C752, C755, C756		CEAS100M50
C761, C762		CEASR10M50
C759, C760		CEASR47M50
C757, C758		CFTXA153J50
C765		CKCYF473Z50

RESISTORS

R771, R772		RD1/4MUF101J
VR751, VR752	(30kΩ – B5X2)	ACS7017
	Other Resistors	RD1/4PU□□□J

OTHERS

	CABLE HOLDER(7P)	51063 – 0705
CN701	CONNECTOR(15P)	KPE15

5. ADJUSTMENTS

1) IDLE CURRENT ADJUSTMENT

1. Connect the measuring instrument as Fig.5-1. (R413 or R414)
2. Set the VOLUME CONTROL to minimum, BASS TONE CONTROL to center, TREBLE TONE CONTROL to center, BALANCE CONTROL to center and REC SELECTOR SWITCH to off. Set VR301 and VR302 to minimum.
3. Set the POWER switch to ON.
4. Adjust VR301 (VR302) so that the voltage between both sides of R413 (R414) becomes 16mV±1mV. (Within 10 seconds from when the relay is turned ON)
5. Ages for 7 minutes.
6. Adjust VR301 (VR302) so that the voltage between both sides of R413 (R414) becomes 11mV±1mV.

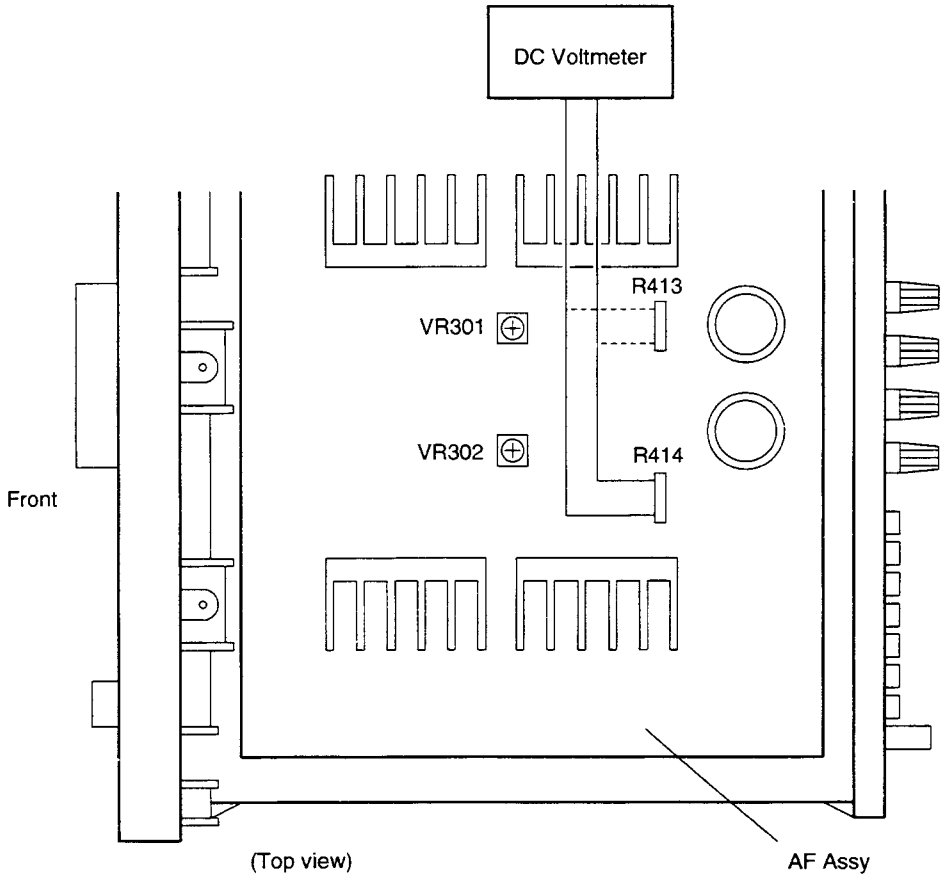


Fig.5-1 Adjustment Method

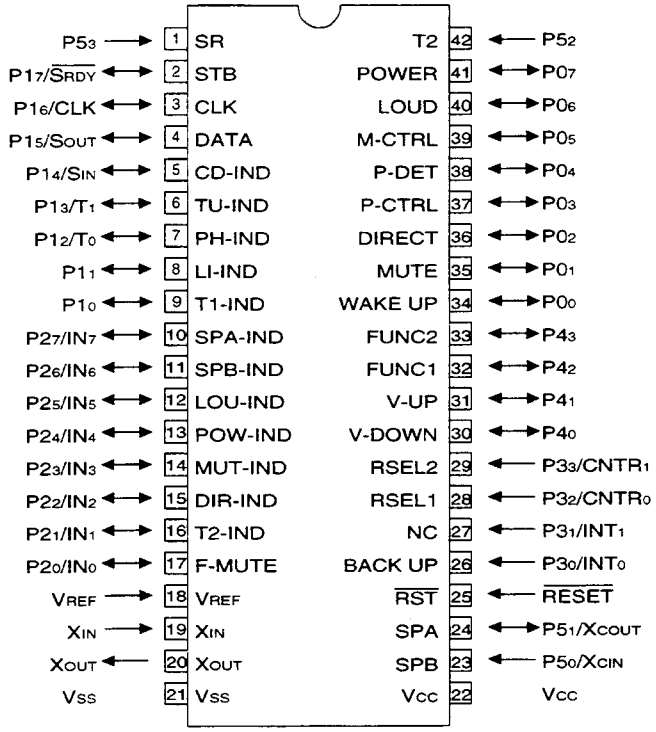
6. IC INFORMATION

■ PD5369A (FRONT R ASSY : IC601)

● REMOTE CONTROL AMP MICROCOMPUTER

● Pin Assignment (Top view)

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

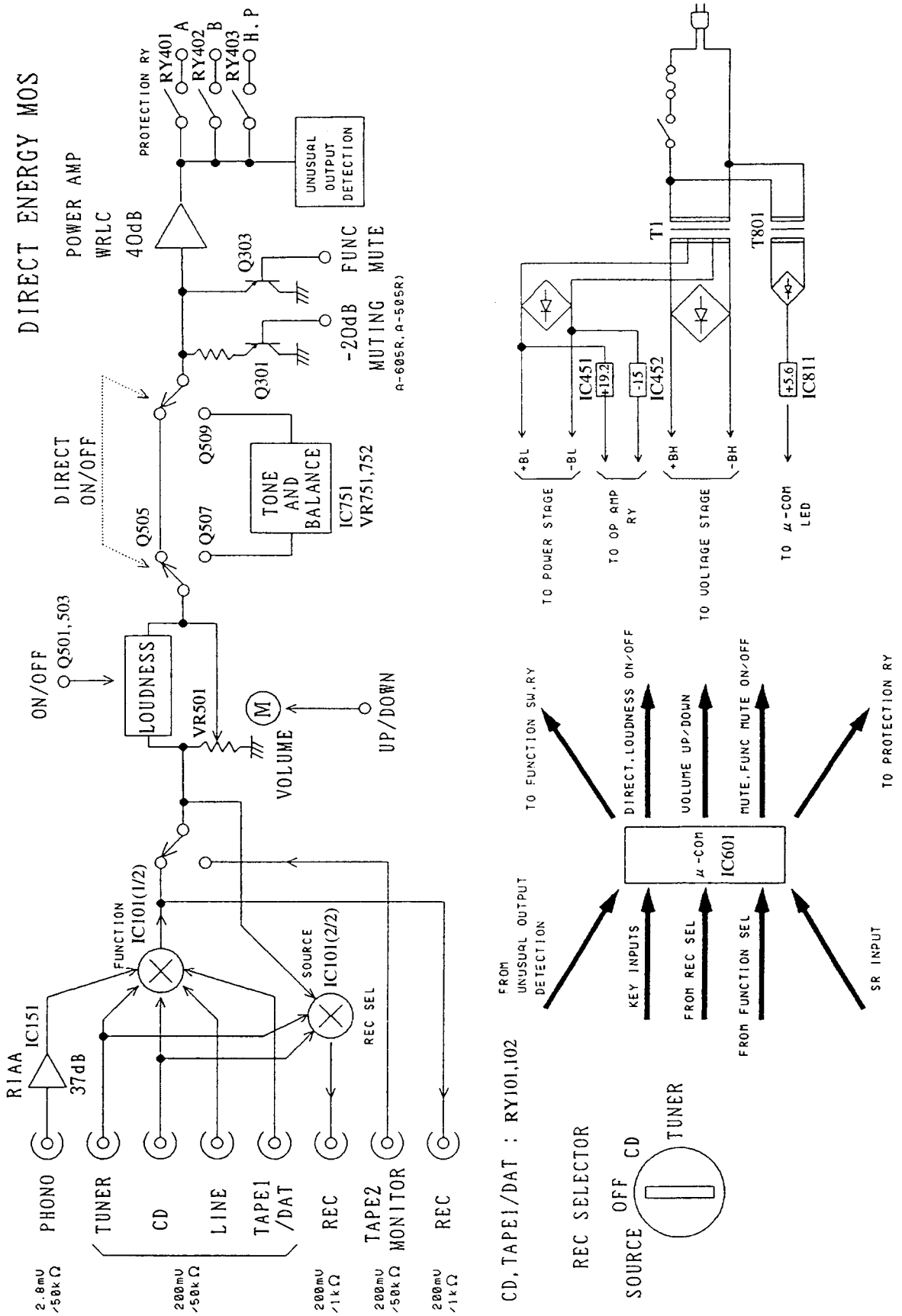


● Pin Function

No.	Pin name	I/O	Function
1	$P5_3$	I	Remote control signal input pin.
2	$P1_7/\overline{SRDY}$	O	STB for TC9163N.
3	$P1_6$/CLK	O	CLOCK for TC9163N.
4	$P1_5/S_{OUT}$	O	DATA for TC9163N.
5	$P1_4/S_{IN}$	O	CD INDICATOR.
6	$P1_3/T_1$	O	TUNER INDICATOR.
7	$P1_2/T_0$	O	PHONO INDICATOR.
8	$P1_1$	O	LINE INDICATOR.
9	$P1_0$	O	TAPE1 INDICATOR.
10	$P2_7/IN_7$	O	SPEAKER-A INDICATOR.
11	$P2_6/IN_6$	O	SPEAKER-B INDICATOR.
12	$P2_5/IN_5$	O	LOUDNESS INDICATOR.
13	$P2_4/IN_4$	O	POWER (STAND-BY) INDICATOR.
14	$P2_3/IN_3$	O	MUTE INDICATOR. MUTE ON : Repeats H and L every 1 second. Normal : "H"
15	$P2_2/IN_2$	O	DIRECT INDICATOR.
16	$P2_1/IN_1$	O	TAPE2 INDICATOR.
17	$P2_0/IN_0$	O	FUNCTION switch MUTE.
18	V_{REF}	I	Pulls up to 5V.
19	X_{IN}	I	4.19MHz.
20	X_{OUT}	O	Ceramic vibrating and connecting terminal.
21	V_{SS}	-	Digatal GND.
22	V_{CC}	-	Power supply +5V.
23	$P5_0/X_{CIN}$	I	SPEAKER-B KEY input.

No.	Pin name	I/O	Function
24	$P5_1/X_{COUT}$	I	SPEAKER-A KEY input.
25	$\overline{RESET}$	I	Reset pin.
26	$P3_0/INT_0$	I	BACK UP detection pin. interrupt specification.
27	$P3_1/INT_1$	O	Not used.
28	$P3_2/CNTR_0$	I	REC selector input 1.
29	$P3_3/CNTR_1$	I	REC selector input 2. interrupt specification.
30	$P4_0$	O	Volume DOWN data output.
31	$P4_1$	O	Volume UP data output.
32	$P4_2$	I	FUNCTION selector input 1.
33	$P4_3$	I	FUNCTION selector input 2.
34	$P0_0$	I	WAKE UP input. Key on wake up specification.
35	$P0_1$	I	MUTE KEY input. Key on wake up specification.
36	$P0_2$	I	DIRECT KEY input. Key on wake up specification.
37	$P0_3$	O	Protection control pin.
38	$P0_4$	I	Output error detection pin
39	$P0_5$	O	MUTING control pin.
40	$P0_6$	I	LOUDNESS KEY input. Key on wake up specification.
41	$P0_7$	I	POWER KEY input. Key on wake up specification.
42	$P5_2$	I	TAPE2 KEY input.

7. BLOCK DIAGRAM



8. FOR A-605R/HY/GR, SD, HV, A-605R-G/HY/EW, A-505R/HY/EW, HY/GR, A-405R/HY/EW, HY/GR, HV ANDA-405R-G/HY/EW TYPES

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

8.1 FOR A-605R/HY/GR, SD, HV AND A-605R-G/HY/EW

A-605R/HY/GR, SD, HV, A-605-G/HY/EW and A-605R/HY/EW have the same construction except for the following:

Mark	Symbol & Description	Part No.					Remarks
		A-605R /HY/EW	A-605R /HY/GR	A-605R /SD	A-605R /HV	A-605R-G /HY/EW	
NSP	CONTROL assembly	AWG7006	AWG7006	AWG7004	AWG7007	AWG7006	
	AC PRIMARY assembly	AWZ7944	AWZ7944	AWZ7946	AWZ7943	AWZ7944	
⚠	FU3 Fuse (T500mA)	AEK1051	AEK1051	AEK1051	Not used	AEK1051	
⚠	FU2 Fuse (T2A)	Not used	Not used	AEK1057	Not used	Not used	*1
⚠	AC power cord	ADG1154	ADG1154	ADG1158	ADG1156	ADG1154	
⚠	Fuse (T5A) (With in AC pulg)	Not used	Not used	Not used	AEK1046	Not used	
⚠	AC socket 3 – P	AKP – 502	AKP – 502	AKP – 515	Not used	AKP – 502	
⚠	T1 Power transformer (AC220 – 230V)	ATS7128	ATS7128	Not used	ATS7128	ATS7128	
⚠	T1 Power transformer (AC110V/120 – 127V/220V/240V)	Not used	Not used	ATS7129	Not used	Not used	
⚠	Swith (Main power)	ASH – 501	ASH – 501	Not used	ASH – 501	ASH – 501	
⚠	Voltage selector S1 (AC110V/120 – 127V/220V/240V)	Not used	Not used	AKX – 507	Not used	Not used	*1
⚠	Voltage selector S2 (AC110 – 127V/220V – 240V)	Not used	Not used	AKX1004	Not used	Not used	*1
	Rear panel	ANC7424	ANC7424	ANC7425	ANC7426	ANC7424	
	Hinge L	AMR7115	AMR7115	AMR7115	AMR7115	AMR7118	
	Hinge R	AMR7116	AMR7116	AMR7116	AMR7116	AMR7119	
	Panel stopper mould	AMR7117	AMR7117	AMR7117	AMR7117	AMR7120	
	Name plate	VAM1032	VAM1032	VAM1032	VAM1032	VAM1051	
	Rotary knob C	AAB7089	AAB7089	AAB7089	AAB7089	AAB7094	
	Rotary knob L	AAB7090	AAB7090	AAB7090	AAB7090	AAB7096	
	Rotary knob B	AAB7091	AAB7091	AAB7091	AAB7091	AAB7095	
	Speaker button	AAD7290	AAD7290	AAD7290	AAD7290	AAD7298	
	Selfillmi button A	AAD7291	AAD7291	AAD7291	AAD7291	AAD7299	
	Selfillmi button B	AAD7292	AAD7292	AAD7292	AAD7292	AAD7300	
	Power button	AAD7293	AAD7293	AAD7293	AAD7293	AAD7301	
	Muting button	AAD7294	AAD7294	AAD7294	AAD7294	AAD7302	
	Top cover	AME1086	AME1086	AME1086	AME1086	AME7370	
	Metal bonnet	ANE7119	ANE7119	ANE7119	ANE7119	ANE7128	
	Panel base	AMB7362	AMB7362	AMB7362	AMB7362	AMB7369	
	Door panel	ANB7050	ANB7050	ANB7050	ANB7050	ANB7056	
	Front panel	ANB7052	ANB7052	ANB7052	ANB7052	ANB7057	
	Screw (For bonnet)	BBT30P080FZK	BBT30P080FZK	BBT30P080FZK	BBT30P080FZK	BBT30P080FNI	
	Operating instructions (English/French/German/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE7077	Not used	Not used	Not used	ARE7077	

Mark	Symbol & Description	Part No.					Remarks
		A-605R /HY/EW	A-605R /HY/GR	A-605R /SD	A-605R /HV	A-605R-G /HY/EW	
	Operating instructions (German)	Not used	ARC7125	Not used	Not used	Not used	
	Operating instructions (English/Spanish/Chinese)	Not used	Not used	ARE7078	Not used	Not used	
	Operating instructions (English)	Not used	Not used	Not used	ARB7080	Not used	
	Remote control unit (CU – A013)	AXD7053	AXD7053	AXD7053	AXD7053	Not used	
	Remote control unit (CU – A015)	Not used	Not used	Not used	Not used	AXD7054	
	Packing case	AHD7308	AHD7308	AHD7326	AHD7308	AHD7315	
	Battery cover	AZN2249	AZN2249	AZN2249	AZN2249	AZN2250	
NSP	Air cap	Not used	Not used	Not used	AHG1087	Not used	*2

Notes *1 : Refer to page 4.
*2 : Refer to page 5.

AC PRIMARY ASSEMBLY

AWZ7946, AWZ7943 and AWZ7944 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		AWZ7944	AWZ7946	AWZ7943	
⚠	RY801	ASR1044	ASR1036	ASR1044	
	H3, H4 Fuse holder	Not used	RKR1003	Not used	*3
	H5, H6 Fuse holder	RKR1003	RKR1003	Not used	

Note *3 : Refer to SCH-4.

8.2 FOR A-505R/HY/EW AND HY/GR

A-505R/HY/EW, HY/GR and A-605R/HY/EW have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		A-605R /HY/EW	A-505R /HY/EW	A-505R /HY/GR	
NSP	CONTROL assembly	AWG7006	AWG7002	AWG7002	
	FRONT R assembly	AWZ8398	AWZ7935	AWZ7935	
NSP	AF COMPLEX assembly	AWK7307	AWK7308	AWK7308	
	AF assembly	AWZ7932	AWZ7933	AWZ7933	
	FRONT L assembly	AWZ8397	AWZ7938	AWZ7938	
⚠	T1 Power transformer (AC220 – 230V)	ATS7128	ATS7127	ATS7127	
	Pocket holder assembly	ANG1864	Not used	Not used	
	Foot	AMR1159	Not used	Not used	
	Insurator	Not used	PNW1912	PNW1912	*4
	Screw (STEEL) (For foot)	ABA1004	Not used	Not used	
	Screw (For door panel)	ABA7023	Not used	Not used	
	Pocket spring	ABH7114	Not used	Not used	
NSP	Cord with plug	ADH1003	Not used	Not used	
	Pocket lock	AMR2587	Not used	Not used	
	Hinge L	AMR7115	Not used	Not used	
	Hinge R	AMR7116	Not used	Not used	
	Panel stopper mould	AMR7117	Not used	Not used	
	Dumper	AXA7036	Not used	Not used	
	Rotary knob C	AAB7089	Not used	Not used	

Mark	Symbol & Description	Part No.			Remarks
		A-605R /HY/EW	A-505R /HY/EW	A-505R /HY/GR	
	Rotary knob A	Not used	AAB7088	AAB7088	For rotary knob C
	Rotary knob L	AAB7090	AAB7087	AAB7087	
	Top cover	AME1086	Not used	Not used	
	Metal bonnet	ANE7119	ANE7118	ANE7118	
	Door panel	ANB7050	Not used	Not used	
	Front panel	ANB7052	ANB7051	ANB7051	
	Screw (For dumper)	BPZ20P080FMC	Not used	Not used	
	Operating instructions (English/French/German/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE7077	ARE7077	Not used	
	Operating instructions (German)	Not used	Not used	ARC7125	
	Packing case	AHD7308	AHD7307	AHD7307	

Note *4 : Refer to page 4.

FRONT R ASSEMBLY

AWZ7935 and AWZ8398 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8398	AWZ7935	
	S602	ASD7009	ASD7001	
	VR601 (500kΩ – B)	ACS7015	ACS7014	

AF ASSEMBLY

AWZ7933 and AWZ7932 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7932	AWZ7933	
	D454	MTZJ33B	MTZJ30B	
⚠	R458, R459	RD1/4PMF2R2J	RD1/4PMF100J	
	RY403	ASR1035	ASR7001	
	Heat sink fitting	ANG7095	Not used	
	Heat sink L	ANH7044	Not used	
	Heat sink M	Not used	ANH7043	For heat sink L

FRONT L ASSEMBLY

AWZ7938 and AWZ8397 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8397	AWZ7938	
	VR751, VR752 (30kΩ – B5X2)	ACS7017	ACS7016	

8.3 FOR A-405R/HY/EW, HY/GR, HV AND A-405R-G/HY/EW

A-405R/HY/EW, HY/GR, HV, A-405-G/HY/EW and A-605R/HY/EW have the same construction except for the following:

Mark	Symbol & Description	Part No.					Remarks
		A-605R /HY/EW	A-405R /HY/EW	A-405R /HY/GR	A-405R /HV	A-405R-G /HY/EW	
NSP	CONTROL assembly	AWG7006	AWG7003	AWG7003	AWG7005	AWG7003	
	AC PRIMARY assembly	AWZ7944	AWZ7945	AWZ7945	AWZ7943	AWZ7945	
	FRONT R assembly	AWZ8398	AWZ7936	AWZ7936	AWZ7936	AWZ7936	
NSP	AF COMPLEX assembly	AWK7307	AWK7309	AWK7309	AWK7309	AWK7309	
	AF assembly	AWZ7932	AWZ7934	AWZ7934	AWZ7934	AWZ7934	
	FRONT L assembly	AWZ8397	AWZ7938	AWZ7938	AWZ7938	AWZ7938	
⚠	FU3 Fuse (T500mA)	AEK1051	Not used	Not used	Not used	Not used	
⚠	AC power cord	ADG1154	ADG1154	ADG1154	ADG1156	ADG1154	
⚠	Fuse (T5A) (With in AC pulg)	Not used	Not used	Not used	AEK1046	Not used	
⚠	AC socket 3 – P	AKP – 502	Not used	Not used	Not used	Not used	
⚠	T1 Power transformer (AC220 – 230V)	ATS7128	ATS7126	ATS7126	ATS7126	ATS7126	
	Rear panel	ANC7424	ANC7423	ANC7423	ANC7426	ANC7423	
	Pocket holder assembly	ANG1864	Not used	Not used	Not used	Not used	
	Foot	AMR1159	Not used	Not used	Not used	Not used	
	Insurator	Not used	PNW1912	PNW1912	PNW1912	PNW1912	*5
	Screw (STEEL) (For foot)	ABA1004	Not used	Not used	Not used	Not used	
	Screw (For door panel)	ABA7023	Not used	Not used	Not used	Not used	
	Pocket spring	ABH7114	Not used	Not used	Not used	Not used	
NSP	Cord with plug	ADH1003	Not used	Not used	Not used	Not used	
	Pocket lock	AMR2587	Not used	Not used	Not used	Not used	
	Hinge L	AMR7115	Not used	Not used	Not used	Not used	
	Hinge R	AMR7116	Not used	Not used	Not used	Not used	
	Panel stopper mould	AMR7117	Not used	Not used	Not used	Not used	
	Dumper	AXA7036	Not used	Not used	Not used	Not used	
	Name plate	VAM1032	VAM1032	VAM1032	VAM1032	VAM1051	
	Rotary knob C	AAB7089	Not used	Not used	Not used	Not used	
	Rotary knob A (For rotary knob C)	Not used	AAB7088	AAB7088	AAB7088	AAB7093	
	Rotary knob L	AAB7090	AAB7087	AAB7087	AAB7087	AAB7097	
	Rotary knob B	AAB7091	AAB7091	AAB7091	AAB7091	AAB7095	
	Speaker button	AAD7290	AAD7290	AAD7290	AAD7290	AAD7298	
	Selfillmi button A	AAD7291	AAD7291	AAD7291	AAD7291	AAD7299	
	Selfillmi button B	AAD7292	AAD7292	AAD7292	AAD7292	AAD7300	
	Power button	AAD7293	AAD7293	AAD7293	AAD7293	AAD7301	
	Muting button	AAD7294	Not used	Not used	Not used	Not used	
	Top cover	AME1086	Not used	Not used	Not used	Not used	
	Metal bonnet	ANE7119	ANE7118	ANE7118	ANE7118	ANE7127	
	Panel base	AMB7362	AMB7362	AMB7362	AMB7362	AMB7369	
	Door panel	ANB7050	Not used	Not used	Not used	Not used	
	Front panel	ANB7052	ANB7049	ANB7049	ANB7049	ANB7058	
	Screw (For dumper)	BPZ20P080FMC	Not used	Not used	Not used	Not used	
	Screw (For bonnet)	BBT30P080FZK	BBT30P080FZK	BBT30P080FZK	BBT30P080FZK	BBT30P080FNI	
	Operating instructions (English/French/German/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE7077	ARE7077	Not used	Not used	ARE7077	
	Operating instructions (German)	Not used	Not used	ARC7125	Not used	Not used	
	Operating instructions (English)	Not used	Not used	Not used	ARB7080	Not used	
	Remote control unit (CU – A013)	AXD7053	AXD7053	AXD7053	AXD7053	Not used	
	Remote control unit (CU – A015)	Not used	Not used	Not used	Not used	AXD7054	
	Packing case	AHD7308	AHD7306	AHD7306	AHD7306	AHD7316	
	Battery cover	AZN2249	AZN2249	AZN2249	AZN2249	AZN2250	
NSP	Air cap	Not used	Not used	Not used	AHG1087	Not used	*6

Notes *5 : Refer to page 4.
*6 : Refer to page 5.

AC PRIMARY ASSEMBLY

AWZ7945, AWZ7943 and AWZ7944 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		AWZ7944	AWZ7945	AWZ7943	
⚠	CN802 AC socket 1 – P H5, H6 Fuse holder	Not used RKR1003	AKP1034 Not used	Not used Not used	

FRONT R ASSEMBLY

AWZ7936 and AWZ8398 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8398	AWZ7936	
	Q611	DTA124ES	Not used	
	R621	RD1/4PU223J	Not used	
	S602	ASD7009	ASD7001	
	S605	ASG1034	Not used	
	VR601 (500kΩ – B)	ACS7015	ACS7014	

AF ASSEMBLY

AWZ7934 and AWZ7932 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7932	AWZ7934	
	C451	ACH7046 (15000μF/50V)	ACH7048 (10000μF/42V)	
	C452	ACH7047 (15000μF/50V)	ACH7049 (10000μF/42V)	
	C464	Not used	CEAS100M50	*7
	C465, C466	CEAS100M50	Not used	
	D453	MTZJ36D	Not used	
	D454	MTZJ33B	Not used	
	D455	MTZJ4.7A	MTZJ4.7C	
	D456	Not used	MTZJ10C	*7
	IC452	NJM79L15A	NJM79M05FA	
	Q301, Q302	2SC2878	Not used	
	Q451	2SC4793	Not used	
	Q452	2SB1238X	Not used	
	R301, R302	RD1/4PU102J	Not used	
	R303, R304	RD1/4PU181J	Not used	
	R319	RD1/4PU824J	Not used	
⚠	R451	RS1MMF330J	RS1MMF100J	
⚠	R452	RD1/4MUF101J	RD1/4MUF4R7J	
⚠	R453	RS2MMF122J	Not used	
⚠	R454	RS2MMF182J	Not used	
	R460	Not used	RD1/4PU472J	*7
	RY403	ASR1035	ASR7001	
	Heat sink fitting	ANG7095	Not used	
	Heat sink	ANH1150	Not used	
	Heat sink L	ANH7044	Not used	
	Heat sink M	Not used	ANH – 697	For heat sink
	Heat sink S	Not used	ANH7042	For heat sink L

Note *7 : Refer to SCH-2.

FRONT L ASSEMBLY

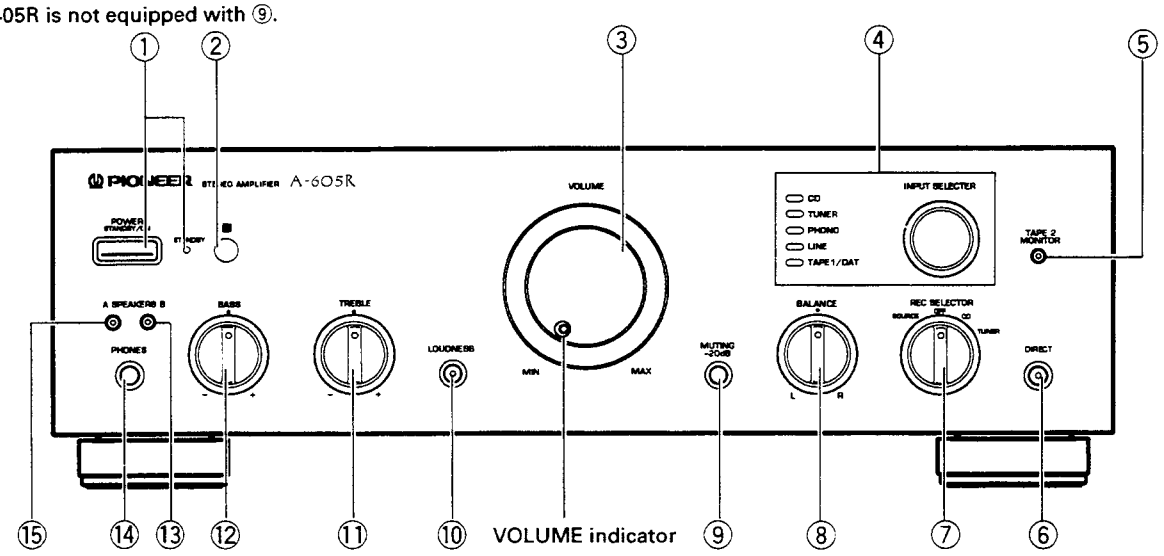
AWZ7938 and AWZ8397 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8397	AWZ7938	
	VR751, VR752 (30kΩ – B5X2)	ACS7017	ACS7016	

9. PANEL FACILITIES

[FRONT PANEL]

The illustration shows mode A-605R.
The illustration shows the hinged panel open.
Model A-405R is not equipped with ⑨.



① POWER STANDBY/ON switch/indicator
This is the switch for electric power.

ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY : When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
When the STANDBY indicator lights, the unit is in STANDBY.

NOTE:
When performing timer recording with this unit, be sure to set the POWER STANDBY/ON switch to ON.

② Remote control sensor window

③ VOLUME control
Use to adjust the volume level.

NOTE:
The TONE effect functions regardless of volume levels.

④ INPUT SELECTOR knob/indicators
Turn the knob clockwise or counterclockwise so that the indicator lights for your desired input source. Turning the knob clockwise cause the lit indicator to rise. Turning counterclockwise causes it to fall.

CD : For compact disc playback with a CD player.

TUNER : For AM or FM broadcast reception with a tuner.

PHONO : For record playback with a turntable.

LINE : Set to this position when listening to a program from a component connected to the LINE terminals.

TAPE 1/DAT : For playback with a cassette deck or digital audio cassette deck connected to the TAPE 1/DAT terminals.

⑤ TAPE 2 MONITOR button/indicator
Use when there is an adaptor component (graphic equalizer, etc.) or cassette deck connected to the TAPE 2 MONITOR terminals.

Off : Indicator goes out when not in use.

On : Indicator lights when using the adaptor component or listening to the cassette deck.

NOTE:
When no connections are made to the TAPE 2 MONITOR terminals, or when they are not in use, be sure to set this switch to the off position. (No sound will be heard if it is set to the on position.)

⑥ DIRECT button/indicator
Use this button when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, BALANCE, LOUDNESS).

On : The indicator lights. The signals input through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

Off : The indicator goes out. The signal passes through the various frequency adjusting circuits.

⑦ REC SELECTOR switch (For TAPE 1/DAT terminals)
When this switch is set to a position other than SOURCE or OFF, the equipment selected by the REC SELECTOR switch can be recorded, irrespective of the INPUT SELECTOR knob and the DIRECT button settings (TAPE 1/DAT terminals).

SOURCE : To record from the equipment selected by the INPUT SELECTOR knob.

OFF : In this position, nothing from the REC terminals of TAPE 1/DAT is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.

CD : To record from the equipment connected to the CD terminals.

TUNER : To record from the equipment connected to the TUNER terminals.

NOTE:
The function selected using the INPUT SELECTOR knob will be recorded irrespective of the position of the REC SELECTOR switch (TAPE 2 MONITOR terminals).

⑧ BALANCE control
Should normally be left in the center position. Adjust the balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L (left) position and if the left side is louder, turn toward the R (right) position.

NOTE:
This control does not operate when the DIRECT button is in the on position.

⑨ MUTING button/indicator (A-605R and A-505R only)
Use to temporarily lower sound volume.

On : The VOLUME indicator flashes. The sound volume is lowered to one-tenth (–20dB).

Off : The VOLUME indicator lights. The sound will return to its previous volume.

⑩ LOUDNESS button/indicator
Use when listening at low volume level.

On : The indicator lights. Boosts low and high frequencies to give added punch to playback even at low volume level.

Off : The indicator goes out. Should normally be left in this position.

NOTE:
This button does not operate when the DIRECT button is in the on position.

⑪ TREBLE tone control
Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, the high-frequency tone is emphasized; when turned to the left, the high-frequency tone is de-emphasized.

NOTE:
This control does not operate when the DIRECT button is in the on position.

⑫ BASS tone control
Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, the low-frequency tone is emphasized; when turned to the left, the low-frequency tone is de-emphasized.

NOTE:
This control does not operate when the DIRECT button is in the on position.

⑬ SPEAKERS B selector button/indicator
Use this button to listen to the speaker system connected to the SPEAKERS B terminals.

On : The indicator lights. Sound is heard from the speaker system.

Off : The indicator goes out. No sound is heard from the speaker system. Set to this position when listening with headphones.

⑭ PHONES jack
When using headphones, insert the plug into this jack.

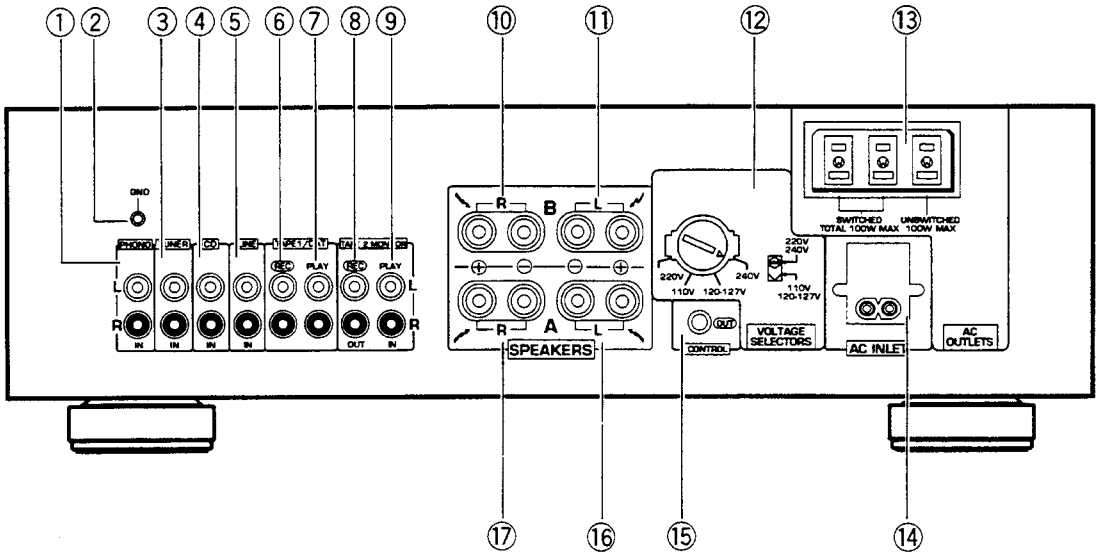
⑮ SPEAKERS A selector button/indicator
Use this button to listen to the speaker system connected to the SPEAKERS A terminals.

On : The indicator lights. Sound is heard from the speaker system.

Off : The indicator goes out. No sound is heard from the speaker system. Set to this position when listening with headphones.

[REAR PANEL]

Illustration shows Multi-voltage model.



① **PHONO terminals**

② **GND (Turntable ground) terminal**

③ **TUNER terminals**

④ **CD terminals**

⑤ **LINE terminals**

⑥ **TAPE 1/DAT REC terminals**

⑦ **TAPE 1/DAT PLAY terminals**

⑧ **TAPE 2 MONITOR REC (OUT) terminals**

⑨ **TAPE 2 MONITOR PLAY (IN) terminals**

⑩ **SPEAKERS B terminals (Right channel)**

⑪ **SPEAKERS B terminals (Left channel)**

⑫ **VOLTAGE SELECTORS**

⑬ **AC OUTLETS**

⑭ **AC INLET jack**
Connect one end of the power cord to here and the other end to an AC wall socket, or the AC outlet of an audio timer.
If you are going to be away from home for a long period of time, disconnect the unit from the wall socket.

⑮ **CONTROL OUT jack**
This jack is for outputting control signals when operating other components bearing the SR mark with the amplifier's remote control unit.

⑯ **SPEAKERS A terminals (Left channel)**

⑰ **SPEAKERS A terminals (Right channel)**

CAUTION:
DO NOT CONNECT MONITOR OR TV SET TO THE AC OUTLET.

10. SPECIFICATIONS

Amplifier Section

Continuous power output
(both channels driven at 20 Hz to 20 kHz)**
[A-605R]
T.H.D. 0.06 %, 8 Ω ..... 60 W + 60 W*
T.H.D. 0.09 %, 4 Ω ..... 90 W + 90 W*
[A-405R]
T.H.D. 0.06 %, 8 Ω ..... 45 W + 45 W*
T.H.D. 0.09 %, 4 Ω ..... 65 W + 65 W*
DIN Continuous power output (both channels driven at 1 kHz)
[A-605R]
T.H.D. 1.0 %, 8 Ω ..... 75 W + 75 W
T.H.D. 1.0 %, 4 Ω ..... 120 W + 120 W
[A-405R]
T.H.D. 1.0 %, 8 Ω ..... 60 W + 60 W
T.H.D. 1.0 %, 4 Ω ..... 90 W + 90 W
Dynamic power output (on EIA dynamic test signal)
[A-605R]
4 Ω/ 2 Ω ..... 140 W/ 190 W
[A-405R]
4 Ω/ 2 Ω ..... 100 W/ 115 W
Total harmonic distortion**
20 Hz to 20 kHz, 30 W, 8 Ω ..... 0.05 %*
Input sensitivity/ impedance
PHONO (MM) ..... 2.8 mV/ 50 kΩ
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2 MONITOR ..... 200 mV/ 50 kΩ
PHONO overload level (MM)
1 kHz, T.H.D. 0.1 % ..... 150 mV
Output level/ impedance
TAPE 1/DAT, TAPE 2 MONITOR output
..... 200 mV/ 1 kΩ
Frequency response
PHONO (MM) ..... 20 Hz to 20 kHz ± 0.5 dB
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2 MONITOR ..... 5 Hz to 150 kHz $^{+0}_{-3}$ dB*
Tone control
BASS ..... ± 8 dB (100 Hz)
TREBLE ..... ± 8 dB (10 kHz)
Loudness contour (volume control set at — 30 dB position)
..... + 5 dB (100 Hz)/ + 3 dB (10 kHz)

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

Signal-to-Noise ratio (IHF short circuit, A network)
[A-605R]
PHONO (MM, 5 mV input) ..... 88 dB*
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2 MONITOR ..... 108 dB*
[A-405R]
PHONO (MM, 5 mV input) ..... 86 dB*
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2 MONITOR ..... 106 dB*
Signal-to-Noise ratio (DIN, continuous power/ 50 mW)
PHONO (MM) ..... 71 dB/ 67 dB*
CD, TUNER, LINE, TAPE 1/DAT,
TAPE 2 MONITOR ..... 95 dB/ 71 dB*
MUTING (volume control set at – 30 dB position)
[A-605R and A-505R only] ..... – 20 dB

Power Supply/ Miscellaneous

Power requirements ..... AC 230 Volts, 50/ 60 Hz
Power consumption
[A-605R] ..... 550 W
[A-405R] ..... 380 W
Dimensions (including knobs and other protruding parts)
[A-605R] ..... 420 (W) × 344 (D) × 132 (H) mm
[A-405R] ..... 420 (W) × 344 (D) × 125 (H) mm
Weight (without package)
[A-605R] ..... 6.6 kg
[A-405R] ..... 6.5 kg

Accessories

Remote control unit 1
Batteries (AA/R6P) 2
Operating instructions 1
Power cord 1

NOTE:
Specifications and design subject to possible modification without notice, due to improvements.

* Measured with the DIRECT button set to on.
** Measured by Audio Spectrum Analyzer.